

AMENDMENTS TO THE SPECIFICATION:

Please amend the paragraph beginning on line 3 of page 2 as follows:

Mainly in Japanese and US markets, DVD players incorporated with the MPEG2 decoding feature are commercialized. The DVD players are capable of reproducing maximum of 133 minute high-quality moving pictures with high-resolution defined by horizontally by 702 dots and vertically by 480 lines, together with high-quality sound. In addition to the higher quality of reproduced images and sounds, advanced features are achieved in these VCD players and DVD players. Such advanced features are quite convenient for sophisticated users who are familiar with such features to enjoy various functions. On the other hand, for ordinary users, the players and its peripherals achieving such advanced features are difficult to use due to the complicated operation required. To ease the user's inconvenience caused by the complicated operability, the VCD players and DVD players recently adopt an On-Screen Display (hereinafter abbreviated as OSD) function. The function is for displaying information on a monitor for user's easy operation. Such information indicates input information corresponding to user's operation, an elapsed time after start of reproduction, a status of the player during reproduction, a special reproduction function, and a type of optical disc. The displayed information is referred to as an on-screen message (hereinafter abbreviated as OSM).

Please amend the paragraph beginning on line 22 of page 16 as follows:

To be specific, in the conventional optical disc playback apparatus OPC, the font of the on-screen message remains unchanged in low resolution of 12 dots by 18 lines whether the reproduced image is high or low in resolution. Therefore, the problem comes up that if the reproduced image in high-resolution, the on-screen message is apparently displayed in smaller size and impaired in its visibility. Further, the number of pixels composing the font of the on-screen message is small. Therefore, another problem comes up that Chinese characters and symbols in high-resolution can not be displayed. Still further, in the future, further an increase in the resolution of various types of reproduced images is expected with an increase in television image resolution and progression of digital compression technique for moving pictures. The font resolution of the on-screen message therefore will need improvement more than ever.

Please amend the paragraph beginning on line 12 of page 17 as follows:

The present invention aims to solve the problems discussed above and to provide an optical disc playback apparatus for displaying an on-screen message such that each font is displayed in high-visibility without much change in size and form regardless of the resolution of the image. When a VCD, Karaoke CD, SVCD (including CVD), or DVD is played back, information recorded thereon and an image display format of data being reproduced are determined. Based on the determination, the on-screen message is displayed in the font having resolution suitably selected for a type of an optical disc or a resolution of an image.

Please amend the paragraph beginning on line 24 of page 17 as follows:

A first aspect of the present invention is directed to an optical disc playback apparatus for reproducing data from a plurality kinds of optical discs with data recorded thereon in different display formats and outputting an on-screen message composed of a font character (hereinafter referred to as font), the font). The apparatus comprising: in accordance with the first aspect of the present invention comprises a reader for reading recorded data from a recording surface of the optical disc; an on-screen message generator for generating a digital character signal sequence to be displayed as the on-screen message; and an on-screen message font-resolution setting unit for controlling the on-screen message generator to set a resolution of the font to a value appropriate for the display format indicated by the recorded data.

~~a reader for reading record data from a recording surface of the optical disc;~~

~~an on-screen message generator for generating a digital character signal sequence to be displayed as the on-screen message; and~~

~~an on-screen message font-resolution setting unit for controlling the on-screen message generator to set a resolution of the font to a value appropriate for the display format indicated by the record data.~~

Please amend the paragraph beginning on line 19 of page 18 as follows:

According to a second aspect, in the first aspect, the apparatus further comprising comprises an optical disc determination unit for determining a type of the optical disc based on the read recorded data, wherein the on-screen message font-resolution setting unit controls the on-screen message generator to set the resolution of the font to 12 dots by 18 lines when the

optical disc is determined to be a music CD.

~~an optical disc determination unit for determining a type of the optical disc based on the read record data, wherein~~

~~the on-screen message font resolution setting unit controls the on-screen message generator to set the resolution of the font to 12 dots by 18 lines when the optical disc is determined as a music CD.~~

Please amend the paragraph beginning on line 2 of page 19 as follows:

~~According to a third aspect, in the second aspect, the apparatus further comprising comprises a display format determination unit for determining a display format of the data to be reproduced based on the read recorded data, wherein the on-screen message font-resolution setting unit controls the on-screen message generator to set the resolution of the font to a first standard resolution when the optical disc is determined to be a disc other than the music CD and when the display format of the data to be reproduced is determined as NTSC.~~

~~a display format determination unit for determining a display format of the data to be reproduced based on the read record data, wherein~~

~~the on-screen message font resolution setting unit controls the on-screen message generator to set the resolution of the font to a first standard resolution when the optical disc is determined as a disc other than the music CD and when the display format of the data to be reproduced is determined as NTSC.~~

Please amend the paragraph beginning on line 12 of page 19 as follows:

~~According to a fourth aspect, in the third aspect, the on-screen message font-resolution setting unit controls the on-screen message generator to set the resolution of the font to a second standard resolution by multiplying the first standard resolution by a predetermined scaling factor when the optical disc is determined to be a disc other than the music CD and when the display format of the data to be reproduced is determined to be PAL.~~

~~the on-screen message font resolution setting unit controls the on-screen message generator to set the resolution of the font to a second standard resolution by multiplying the first standard resolution by a predetermined scaling factor when the optical disc is determined as a disc other than the music CD and when the display format of the data to be reproduced is determined as PAL.~~

Please amend the paragraph beginning on line 23 of page 19 as follows:

According to a fifth aspect, in the fourth aspect, the predetermined scaling factor is 1.2.
the predetermined scaling factor is 1.2.

Please amend the paragraph beginning on line 25 of page 19 as follows:

According to a sixth aspect, in the third aspect, the first standard resolution is set to 12 dots by 18 lines when the optical disc is determined as to be a video CD.

Please amend the paragraph beginning on line 3 of page 20 as follows:

According to a seventh aspect, in the third aspect, the first standard resolution is set to 24 dots by 24 lines when the optical disc is determined as to be any one of an SVCD or DVD.

Please amend the paragraph beginning on line 6 of page 20 as follows:

According to an eighth aspect, in the second aspect, the apparatus further comprising comprises a display format determination unit for determining a display format of the data to be reproduced based on the recorded data, wherein the on-screen message font-resolution setting unit controls the on-screen message generator to set the resolution of the font to a predetermined standard resolution when the optical disc is determined to be a disc other than the music CD and when the display format of the data to be reproduced is determined to be PAL.

~~a display format determination unit for determining a display format of the data to be reproduced based on the record data, wherein~~

~~the on-screen message font resolution setting unit controls the on-screen message generator to set the resolution of the font to a predetermined standard resolution when the optical disc is determined as a disc other than the music CD and when the display format of the data to be reproduced is determined as PAL.~~

Please amend the paragraph beginning on line 17 of page 20 as follows:

According to a ninth aspect, in the eighth aspect, the predetermined standard resolution is set to 12 dots by 21 lines when the optical disc is determined as to be a video CD.

Please amend the paragraph beginning on line 20 of page 20 as follows:

According to a tenth aspect, in the eighth aspect, the predetermined standard resolution is set to 24 dots by 28 lines when the optical disc is determined as to be any one of an SVCD or DVD.

Please amend the paragraph beginning on line 23 of page 20 as follows:

According to an eleventh aspect, in the second aspect, the optical disc determination unit determines the type of the optical disc based on a control bit of a TOC included in the recordeddata.

Please amend the paragraph beginning on line 1 of page 21 as follows:

According to a twelfth aspect, in the eighth aspect, the display format determination unit determines the display format of the data to be reproduced based on a sequence header included in the recordeddata.

Please amend the paragraph beginning on line 5 of page 21 as follows:

According to a thirteenth aspect, in the first aspect, the apparatus further ~~comprising:~~ comprises a signal sequence separator for separating a first music CD signal sequence and a non-music CD signal sequence which is a signal sequence other than the first music CD signal sequence, from the recorded data; a digital signal processor for converting video signals included in the separated non-music CD signal sequence into a decoded digital signal sequence and converting audio data included in the non-music CD signal sequence to a second music CD signal sequence; a video signal converter for converting the decoded digital signal sequence and the digital character signal sequence into analog video signals; and an audio signal converter for converting the first music CD signal sequence and the second music CD signal sequence into analog audio signals.

~~a signal sequence separator for separating a first music CD signal sequence and a non-music CD signal sequence which is a signal sequence other than the first music CD signal sequence, from the record data;~~

~~a digital signal processor for converting video signals included in the separated non-music CD signal sequence into a decoded digital signal sequence and converting audio data included in the non-music CD signal sequence to a second music CD signal sequence;~~

~~a video signal converter for converting the decoded digital signal sequence and the digital character signal sequence into analog video signals; and~~

~~an audio signal converter for converting the first music CD signal sequence and the second music CD signal sequence into analog audio signals.~~

Please amend the paragraph beginning on line 3 of page 22 as follows:

A sixteenth aspect of the present invention is directed to an optical disc playback method for reproducing data recorded on an optical disc and outputting an on-screen message to be displayed in a font character of a predetermined ~~resolution, the method comprising:~~ resolution. The method in accordance with the sixteenth aspect of the present invention comprises reading recorded data from a recording surface of the optical disc; generating a digital character signal sequence to be displayed as the on-screen message; and setting a resolution of the font character based on the read recorded data.

~~reading record data from a recording surface of the optical disc;~~

~~generating a digital character signal sequence to be displayed as the on-screen message;~~

~~and~~

~~setting a resolution of the font character based on the read record data.~~

Please amend the paragraph beginning on line 9 of page 29 as follows:

Further, a predetermined types of fonts F varied in resolution may be previously stored in a ROM or the like, and then the one that matches the setting may be read out therefrom. Alternatively, a font Fs having the standard resolution may be stored in the ROM, and the font F in any resolution may be generated from the font Fs through processing. Although the latter is adopted in the embodiment, the former may also be adopted.

Please amend the paragraph beginning on line 9 of page 30 as follows:

In an optical disc determination subroutine of step #200, the type of the optical disc Od set in the optical disc playback apparatus OPP is determined. In the embodiment, the optical disc Od is determined as any one of the music CD, VCD, SVCD (CVD), or DVD. The determination can be surely made on an arbitrary type of the future optical disc Od that records digital information thereon, with only with an easy change in the structure. Then the procedure advances to a next step #300.

Please amend the paragraph beginning on line 17 of page 30 as follows:

In an OSM standard-font-resolution setting subroutine of step #300, the standard font resolution is set for each type of the optical discs Od determined in step #200. In the embodiment, the font resolution for the image in the NTSC format is set as the standard. That means, the font Fs in the standard resolution of 12 dots by 18 lines is set if the optical disc is determined ~~as the to be a~~ music CD. The font FnVr in the standard resolution of 12 dots by 18 lines is set if the optical disc is determined ~~as the to be a~~ VCD. The font FnSr and the font FnDr both in the standard resolution of 24 dots by 24 lines are set if the optical disc is determined ~~as the to be an~~ SVCD ~~and or~~ DVD, respectively. As is described above, the standard resolution may be set differently from the above. The procedure then advances to a next step #400.

Please amend the paragraph beginning on line 25 of page 31 as follows:

In step S5, error handling such as prompting a user to set the optical disc Od is performed. In detail, under the control of the system controller 16, a display (not shown) provided on the optical disc playback apparatus OPP shows that the optical disc Od is not set. Then, the procedure returns to step S3 and waits for the optical disc Od ~~being to be~~ set.

Please amend the paragraph beginning on line 13 of page 32 as follows:

In step S9, the system controller 16 determines whether or not the optical disc Od being played back is ~~the a~~ music CD, based on the control bit (information signal Si) read in step S7. If a value of the control bit represented by the information signal Si outputted from the first digital signal processor 15 indicates ~~the that the optical disc Od is a~~ music CD, the procedure advances to step S19 in the OSM standard-font-resolution setting subroutine #300.

Please amend the paragraph beginning on line 20 of page 32 as follows:

On the other hand, if determined No in step S9, meaning that the optical disc Od being played back is not ~~the a~~ music CD, the procedure advances to step S11.

Please amend the paragraph beginning on line 23 of page 32 as follows:

In step S11, as is done in step S9, it is determined whether or not the optical disc Od being played back is ~~the a~~ VCD, based on the information signal Si (control bit). If Yes, meaning that the

optical disc Od is determined as ~~the to be~~ a VCD, the procedure advances to step S21 in the OSM standard-font-resolution setting subroutine #300. If determined No, meaning that the optical disc Od is not ~~the a~~ VCD, the procedure goes to step S13.

Please amend the paragraph beginning on line 5 of page 33 as follows:

In step S13, as is done in steps S9 and S11, it is determined whether or not the optical disc Od being played back is ~~the a~~ SVCD. If Yes, the procedure advances to step S23 in the OSM standard-font-resolution setting subroutine #300. If No, the procedure goes to step S15.

Please amend the paragraph beginning on line 10 of page 33 as follows:

In step S15, as is done in steps S9, S11, and S13, it is determined whether or not the optical disc Od being played back is ~~the a~~ DVD. If Yes, the procedure advances to step S25 in the OSM standard-font-resolution setting subroutine #300. If No, meaning that the optical disc Od being played back is not any one of ~~the a~~ music CD, VCD, SVCD, and DVD, the procedure goes to step S17.

Please amend the paragraph beginning on line 17 of page 33 as follows:

In step S17, error handling such as prompting a user to set an appropriate optical disc Od is performed. In detail, under the control of the system controller 16, the display (not shown) provided on the optical disc playback apparatus OPP shows that the optical disc Od being set is not supported (playable) by the optical disc playback apparatus OPP, i.e., not being any one of the music CD, VCD, SVCD, and DVD. Then, the procedure returns to step S3 and waits for ~~the an~~ appropriate optical disc Od ~~being to be~~ set.

Please amend the paragraph beginning on line 9 of page 34 as follows:

If it is determined in the above step S9 that ~~the a~~ music CD is being played back, in step S19, 12 dots by 18 lines defined for the NTSC format is set as the standard font resolution of the on-screen message. The procedure then advances to the display format determination subroutine #400, the OSM output-font-resolution setting subroutine #500, and then to the OSM display subroutine #600.

Please amend the paragraph beginning on line 16 of page 34 as follows:

If it is determined in the above step S11 that ~~the a~~ VCD is being played back, in step S21, 12 dots by 18 lines defined for the NTSC format is set as the standard font resolution of the on-screen message. The procedure then advances to step S27 in the display format determination subroutine #400.

Please amend the paragraph beginning on line 21 of page 34 as follows:

As such, in the embodiment, the font resolution of the on-screen message is set as 12 dots by 18 lines if the optical disc Od is ~~the a~~ music CD ~~and the or~~ a VCD. It is needless to say, however, that the font resolution may be set differently.

Please amend the paragraph beginning on line 25 of page 34 as follows:

If it is determined in the above step S13 that ~~the a~~ SVCD is being played back, in step S23, 24 dots by 24 lines defined for the NTSC format is set as the standard font resolution of the on-screen message. The procedure then advances to step S27 in the display format determination subroutine #400.

Please amend the paragraph beginning on line 5 of page 35 as follows:

If it is determined in the above step S15 that ~~the a~~ DVD is being played back, in step S25, 24 dots by 24 lines defined for the NTSC format is set as the standard font resolution of the on-screen message. The procedure then advances to step S27 in the display format determination subroutine #400.

Please amend the paragraph beginning on line 10 of page 35 as follows:

As such, in the embodiment, the font resolution of the on-screen message is set as 24 dots by 24 lines if the optical disc Od is ~~the a~~ SVCD ~~and the or~~ a DVD. It is needless to say, however, that the font resolution may be set differently. [#400]

Please amend the paragraph beginning on line 4 of page 36 as follows:

In step S33, error handling such as prompting a user to set an appropriate optical disc Od is performed by displaying that the display format of the reproduced image is not in the adaptable

format, i.e., the NTSC or the PAL. Then, the procedure returns to step S3 and waits for ~~the an~~ appropriate optical disc ~~Od~~ ~~being to be~~ set. [#500]

Please amend the paragraph beginning on line 22 of page 42 as follows:

The operation of the optical disc playback apparatus OPP1 is basically the same as that of the optical disc playback apparatus OPP described by referring to FIGS. 1 to 5 except for the operation related to the above MPEG1 decoder 28. Therefore, the description thereof is omitted. Note that the optical disc ~~play baek~~ playback apparatus OPP1 of this embodiment is structurally specialized for playing back ~~the a~~ VCD.